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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,785	10/27/2003	Nathan J. Lee	PU2180	2784

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EXAMINER	
HSU, RYAN	

ART UNIT	PAPER NUMBER
3714	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/605,785	LEE ET AL.	
	Examiner	Art Unit	
	Ryan Hsu	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-20 and 25-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-20 and 25-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

In response to the Appeal Brief filed on 3/10/06, prosecution was re-opened. Claims 17-20 and 25-28 are pending in the current application.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 17 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 6,638,175 B2. Claim 17 is directed towards "a diagnostic golf club system comprising: a diagnostic golf comprising a club head, a shaft attached to the club head, a plurality of strain gauges attached to the shaft, the strain gauges capable of measuring data related to the golf club during a golf swing and an internal memory device including a non-volatile flash buffer memory capable of receiving and storing data from the strain gauges". Claim 1 of US patent 6,638,175 B2 (herein referred to as '175) is directed towards "a diagnostic golf club system comprising: a shaft and a club head, the shaft attached to the club head, a plurality of strain gauges attached to the shaft, each of the plurality of strain gauges capable of measuring data related to the golf club during a golf swing and an internal memory device capable of receiving and storing data from the plurality of strain gauges, the internal memory device including a non-volatile flash buffer memory disposed within the shaft". Additionally,

Claim 17 of the current diagnostic golf club system is further directed towards "a computer located separate and spaced apart from the diagnostic golf club for processing the data stored in the internal memory device; and an interface mechanism removably coupled to the diagnostic golf club for providing communication between the diagnostic golf club and the computer, the interface mechanism including a connection plug having a plurality of pins for connection to a plurality of receptors on the diagnostic golf club, wherein the internal memory device is capable of storing data for multiple swings of the diagnostic golf club until the data is uploaded to the computer via the interface mechanism". US patent '175 also is directed towards "a computer for processing the data from the internal memory device, the interface mechanism being removably coupled to the golf club, wherein the non-volatile flash buffer memory is capable of storing data for multiple swings of the diagnostic golf club until the data is uploaded to the computer via the interface means". Both claims are directed towards "a diagnostic golf club comprising a club head, and a shaft attached to the club head" as found in claim 17 of the current application and "a diagnostic golf club comprising a shaft and a club head and the shaft is attached to the club head". Furthermore, both claims 17 and claim 1 of US patent '175 are directed towards a plurality of strain gauges attached to the shaft that are capable of measuring data related to the golf club during a golf swing and contain non-volatile memory capable of receiving and storing data from the strain gauges. The claims also are directed towards a computer located separate and spaced apart from the diagnostic golf club for processing the data stored in the internal memory device. The claims are directed towards an interface mechanism that is removably coupled to the diagnostic golf club for providing communication between the diagnostic golf club and the computer and includes a connection plug having a plurality of pins for connection to

a plurality of receptors on the diagnostic golf club. Finally, the claims are also directed towards an internal memory device or non-volatile flash buffer memory, these two are directed towards identical subject matter since a non-volatile flash buffer memory in the limitations of the claims serve as a internal memory device. These two claims as a whole are directed towards identical subject matter. This is a double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17, 19, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US 3,792,863) and in view of Allen (US 4,940,236).

Regarding claims 17 and 25, Evans teaches a swing measurement and multi-swing display that that comprises a diagnostic golf club comprising a club head [14], a shaft attached to the club head (*see Fig. 1 and the related description thereof*), a plurality of strain gauges attached to the shaft, the strain gauges capable of measuring data related to the golf club during a golf swing. Additionally, Evans teaches an internal memory device of a "console" (*ie: a computer*) located in a separate space for processing the respective outputs of the strain gauges and stores the results in the memory device (*see col. 2: ln 9-24*). The strain gauges taught by Evans provides the club with the ability to receive and store temporarily (*enough time to transfer it to the remote consol*) the information collected from the swing of the club. Evans teaches an interface mechanism that is coupled to the diagnostic golf club for providing communication

between the diagnostic golf club and the computer (*ie: the FM transmitter (golf club) and receiver (in the console)* (*see elements [22,24,26,30] of Fig. 1 and the related description thereof, col. 2: ln 32-45*). Furthermore, Evans teaches a means for transferring the swing load measurements to the console (*see Figs. 1-2 and the related description thereof*). The console taught in Evans incorporates an internal memory device on the console to store data for multiple swings of the diagnostic golf club and then the data is uploaded to the console via the interface mechanism (*ie: information transmitted from the golf club to the console*) (*see Nth Digital Memory [40] of Fig. 1 and the related description thereof*) (*see elements [40,52] of Figs. 1 and the related description thereof, col. 2: ln 46-56, col. 3: ln 12-19*). However, Evans lacks in teaching the use of an internal memory device located in the golf club. Allen teaches in an analogous golf club the use of a distance computer built entirely into a golf club without significantly altering the swing-weight, total weight, feel, or durability of the club. Additionally, Allen teaches, an integrated circuit board that contains internal memory to store information from sensors to be mounted in the shaft parallel to the shaft access (*see Figs. 12-15 of the related description thereof, col. 4: ln 10-15, col. 8: ln 1-17*). This integrated circuit board enables the information to be stored and then displayed to the user. Therefore it would have been obvious to one of ordinary skill in the art, at the time of the applicant's invention to combine Allen's teaching of incorporating integrated circuit boards with internal memory devices into a club to process and store information and Evans system in order to create a computer aided diagnostics system that incorporates an internal memory device incorporated into a golf club without significantly changing the swing-weight and total experience for the player.

Regarding claims 19 and 26, Evans teaches a golf club system wherein the diagnostic golf club is selected from the group consisting of a driver, a fairway wood, an iron and a putter.

Regarding claim 27, Evans teaches a diagnostic golf club that comprises a club head, a shaft attached to the club head and means for measuing swing loads of a golfer during golf swing (*see col. 1: ln 58-col. 2: ln 24*). Evans incorporates a swing load measuring on the shaft of the diagnostic club in the form of strain gauges. The implementation of Allen distance calculator golf club implements elements of a computing device to collect information from a swing of the club (*see Figs 12-15, col. 2: ln 10-15, col. 8: ln 1-17*). Allen incorporates through its use of a computing device on the club to include memory devices to store the information collected from a swing of the club. Therefore although Evans and Allen teach the claimed invention except for a ring buffer memory they do incorporate the use of memory within the club device. As is old and well known in the computing arts all computers implement the use of a memory storage device that includes flash memory or random access memory (*ie: RAM*) among the various but limited types of memory available that are classified as non-volatile memory at the time the invention was made. Thus it would have been obvious to one of ordinary skill at the time the invention was made to implement a ring buffer memory as opposed to a generic RAM chip, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use a matter of obvious design choice. *In re Leshin, 125 USPQ 416.*

Claims 18, 20, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans and Allen as applied to claims above, and further in view of Bouton (US 5,472,205).

In regards to claims 18, 20, and 28, Evans and Allen teach a diagnostic golf club that includes an internal memory device, a power control circuit, a signal conditioning circuit for the plurality of strain gauges and a communication circuit (*see Fig. 1, col. 1: ln 58-col. 2: ln 9*). As taught by Allen, a circuit board or interface mechanism may be fashion on the surface of the club or within any space where it may fit such as the hollow interior of the shaft (*see Figs. 12-13 and the related description thereof*). Therefore Evans and Allen teach the incorporation of an internal memory device, a power control circuit, a signal conditioning circuit for the plurality of strain gauges (*see Fig. 1 of Evans and Fig. 15 of Allen and the respective related description thereof*). However, they are both silent with regard to a serial communication circuit.

Bouton teaches an analogous video golf system that responds to a user swinging golf club and a sensing system in order to give feedback to the user. In Bouton's invention, he teaches the use of a microcontroller and a serial port transmitter to send information to a computer (*see col. 2: ln 31-48*). Bouton teaches that it is possible to send information in a variety of ways one of which is a serial data transmitter (*see col. 5: ln 29-54*). In addition the incorporation of a serial interface device includes the use of a plurality of pins and receptors to connect one device to another. Therefore one would be motivated to modify Evans invention to include a serial interface as a means for transmitting the diagnostic information as an obvious design choice. It would thereby be obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bouton with Evans in order to create a golf diagnostic device using a serial interface communication device to communicate between the golf club and a processing console.

Response to Arguments

Applicant's arguments filed 3/10/06 have been fully considered but they are not persuasive. With regard to the arguments of claims 17 and 19, applicant argues that the prior art of record does not incorporate "an internal memory device including a non-volatile flash buffer memory...wherein the internal memory device is capable of storing data for multiple swings of the diagnostic golf club until the data is uploaded to the computer via the interface mechanism". The applicant has argued that the prior art of record does not enable the use of a non-volatile flash buffer memory. Examiner respectfully disagrees. Evans teaches the elements of recording swing data and stores it in a memory device. Allen teaches elements of recording distance calculations incorporating the integrated circuit board and memory devices onto the golf club itself. In combination these two inventions meet the limitations of the claims set forth. The fact that a non-volatile flash buffer memory was used inherently offers the advantages that the applicant has argued. However, it would have been an obvious matter of design choice for any one of routine skill in the art at the time the invention was made to simply replace the generic memory disclosed in Evans and Allen with that of a non-volatile memory device. Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the non-volatile flash buffer memory can store temporal data for up to 60 swings) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to applicant arguments that Evans and Allen lack in teaching an athletic swing measurement system an internal memory device on the diagnostic golf club. Examiner respectfully disagrees. Evans teaches a system where the golf club sends data to the computer located away from the club and provides feedback to the user. With regards to the internal memory device, Allen teaches a processing and computing means located inside the club device. The club stores information in order to calculate the information gathered from the club sensors. This memory storage if incorporated into Evans in place of the internal memory devices in the console would then meet the limitations of the claim.

With regard to claims 25-27, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the non-volatile flash buffer memory can store temporal data for up to 60 swings, and the record/playback) are not recited in the rejected claims. Therefore the claim has simply been interpreted as an internal memory device in a diagnostic golf club as taught in Allen. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to claims 18, 20, and 28 the Applicant has not proposed any new arguments that have not been addressed above.

Conclusion

Any inquiry concerning this communication or earlier communication from the examiner should be direct to Ryan Hsu whose telephone number is (571)-272-7148. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert P Olszewski can be reached at (571)-272-6788.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, contact the Electronic Business Center (EBC) at 1-866-217-9197 (toll-free).

RH

May 9, 2006

XUAN M. THAI
SUPERVISORY PATENT EXAMINER

TC3700